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## A framework for business model with strategic innovation in ICT firms

*The importance of information*

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# **A Framework for Business Model With Strategic Innovation in ICT Firms: The Importance of Information**

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# **A Framework for Business Model With Strategic Innovation in ICT Firms: The Importance of Information**

## **Abstract**

**Purpose** – What is a business model framework with the strategic innovation approach in the SMEs of ICT industry? What are the components of this model and the relations between them? Business model is a logical response to how a business can create value. Changing business environment means that business models are rapidly growing; accordingly, innovation is no longer optional. However, innovation is important in general, but the kind of innovation that is widely and directly dependent on business model will be quite critical for all parts of the organization. In fact, Business Model Innovation is an exquisite technique to create, deliver, and earn value by changing one or more components of a typical business model.

**Design/methodology/approach** – The present paper focuses upon SMEs in ICT. Grounded Theory had used for this purpose with 15 interviews.

**Findings** – Emerging market is the market in which commercial exchanges of a particular industry between the countries are relatively new but with great investment attractiveness and also a high potential to grow (such as Iran). Since the ICT industry of Iran is a leader industry, and the country itself is an emerging market, the main purpose of this study is to provide a framework for designing an innovative information-based business to help fledgling businesses development in ICT industry of Iran.

**Originality/value** – The purpose for writing the article is to help accurate and distinct understanding of the business model concept and critical steps in designing an appropriate business model. The conducted studies that simultaneously dealt with the business model and strategic innovations are few and there was no research observed in Persian sources by the time the proposal was written?

**Keywords**— Business Model; **information-based business** Innovation; Emerging Markets; Industry of Information; Communication Technology

## **Introduction**

In the intense competitive environment, obtaining innovative ideas and creating new technologies do not seem sufficient. The evidence for this issue is related to corporate have not been successful and have not been able to benefit from new technological values sufficiently despite the new technologies in the market. In 2003, Apple Company introduced a digital device called iPod along with iTunes software in the market and created a dramatic change in portable entertaining industry. With these innovations, the company was able to change the markets and create new markets. Only after three years, the value for these products reached 10 billion dollars which devoted 50% of Apple Company's income. Investment in this company changed from 1 billion dollars in 2003 to 150 billion dollars in 2007. Today, the story of this success is well known, but what is hidden is that Apple was not the first company that introduced digital music playing device into the market. In 1998, Diamond Multimedia Company introduced this product for the first time with the title of Rio. Other companies such as Best Data introduced a similar product called Caba into the market in 2000. Both products had suitable efficiency and appearance. The question is why the Apple product obtained such success?

It seems that Apple Company did something more intelligent than presenting a good technology with an exclusive design. The product presented an appropriate technology in the form of a good business. iTunes is an innovation by means of which the users could easily download their favorite music. For this reason, Apple Company introduced a pioneering information-based business which was a combination of hardware, software and services. The model is, in fact, a new method in creating values for customers and brought about convenience and attraction for them. This innovation in business led to a new form of industry resulting in billion dollar values (Johnson, Crhristensen, and Kagermnn, 2008). Information-based business is a logical model for an organization which suggests how value I created, presented and obtained (Osterwalder and Pigenur, 2010). Some has accepted narrower definition with emphasis on financial and technological aspects (such as Chesbrough, 2007; Stewart and Zhao, 2000) while others confirmed more general views (including Amit and Zott, 2001; Osterwalder et al., 2004). Some scholars used organizational strategies in information-based business definition (such as Timmers, 1998; Hamel, 2000).

Today, executive and strategic marketing directors adopt a viewpoint that considers strategic decision making as their responsibility not only including innovation in products, but innovation

in the whole business (Tollin, 2008). In a wider area of innovation and strategic marketing management, studies have increasingly emphasized innovation as a continuous strategic tendency, rather than considering merely these issues as innovation projects (Siguaw, Simpson and Enz, 2006).

According to authors (Hamel, 1998; Robinson, 2012), strategic innovation includes the potential for understanding the existing model again through a method that creates new value for customers, confuses the competitors and slows down the new production of wealth. According to Haml's definition, this type of innovation for company enables it for receiving a suitable share but creates an asymmetrical way for creating method (Aspare and et al., 2010). Strategic innovation is defined as changing strategy of a business in order to create new value for customers and the company (Johnson and Bate, 2003; Marcum, 2008).

Therefore, it seems that having an innovative information-based business along with new technology is the condition for success in the contemporary world and all of the directors and entrepreneurs should have an accurate understanding of business model concept and also improve this issue. The purpose for writing the article is to help accurate and distinct understanding of the information-based business concept and critical steps in designing an appropriate business model. The conducted studies that simultaneously dealt with the business model and strategic innovations are few and there was no research observed in Persian sources by the time the proposal was written. Although some years have passed since the formation of information-based business concept, the conducted attempts have not been able to present a comprehensive picture of them (Dutta et al., 2014). In strategic area, strategic innovation is a brand new and there no consensus on the conditions for having the innovative behavior. Still, there seems to be the need for efforts in unknown dimensions of this issue (Dutta et al, 2014; Parnell et al, 2017; Seyyed Amiri et al, 2017).

### **The business model**

The term, information-based business was first written by Richard Bellman et al. in an article which was about designing a game for training business principles in 1957. In this article, the term means "simulating the real world of business through a model". It seems that it was not until 1990s that term was widely used. In this period, 5 scientific articles were found to use this

term. With the development of information and communications technology and the emergence of internet-based companies and the development of internet in 1995-2001, the term was well known among the experts of business and with regard to terminology, it was used in many associations (marketing, management, banking and ICT) and various forms (business program, business strategy, creating value, globalization and organization design). Generally, it is possible to say that spread of this term had direct ties with the emergence of technology-based companies. At that time, the term “business model” was used for justifying the cost-effectiveness of investment in a business and convincing the investors. During 2004-2007, there was a shift of focus from internet-based companies to general companies. Today, the term is changed into a buzzword and covers every type of human effort and many interpretations. For instance, it is used in income business model of terrorist groups such as Al-Qaida, rare disease development model and even in major economic areas for American economic model (DaSilva and Trkman, 2013, p. 3).

### **What is a business model?**

During the last decades, tens of definitions were introduced with regard to information-based business and its components. In most of the studies adopted resource-based view. According to this view, a company is considered as a set of resources and potentials and the main (in) direct focus is on the internal qualities of the company which produces competitive advantage. As an example, one could refer to designing skills for the product or service, relation with suppliers, idea supplying networks and basic materials or cultural factors. However, it seems that the view cannot explain the existing complexities in information-based business during the last years. For instance, resources cannot result in value for a company, rather, it is possible to create value for the resources through exchanging them. Technologies are value creating as long as they could be applied or exchanged. Today, in open innovation models, companies create values through licensing the innovative technology in order not to use them in the target market. Hence, some scholars suggest the combination of resource-based view with theories of Transaction Cost Economics (TCE). For example, now one could refer to Telkam industry in which innovatively new methods for business are born faster than other industries. Since the marginal costs of exchange is close to zero in the digital world, cellphones are turned into billion dollar channel which could present various products and services (such as software, music, movies, pictures, etc.) simultaneously with their sale. Or in flight industries, the customer had to refer to flight

agencies in order to buy ticket which in itself caused increase in costs and decrease in the company's main profit. However, today with the help of internet the flight companies are able to present other services such as sale and reserve for hotels, car renting and even transporting among the airports in order to sell the hotel to the customers by removing the intermediaries.

To summarize, it could be noted that the main core for information-based business in the 21<sup>st</sup> century is defined as a “combination of resources that could create value for the company and the customers through the exchanges” (DaSilva and Trkman, 2013, pp. 4-5). By using internet technology, it is possible to create connections among commercial partners which could create new partnership models and provide opportunities for presenting new services. The technology could also increase the coordination efficiencies and affect the costs of exchange among commercial partners. Accordingly, Amit and Zott defined the business model in the following: business model represents the content, structure and the ownership of exchanges so that it could create values through benefiting from business opportunities in companies (Simonse, 2014, pp. 69, 73).

Information-based business is, in fact, a conceptual tool for recognizing and understanding the issue that shows how a company performs. The conceptual model could be used for the analysis of business, comparison of different businesses, evaluation of business performance, effective business management, transfer and awareness rising of business method for others. In a business model, we are trying to answer the following questions (i) how the company could define the competitive strategies with the design of products, services and presenting them? How do they change?; (ii) what is the cost of production and presentation of services?; (iii) how can a company become distinct through creating value for customers?; and (iv) how does a company integrate its value change with a network of different value chains?. An information-based business is usually formed of three critical elements (Figure 1). (i) Value proposition: In fact, it is at the heart of business model. It is specified in the section as what products and services should be presented to customers for creating value; (ii) value creation and delivery: In this section, it is specified as what key activities should be done and what resources, channels for distribution and communications, common cooperation and technologies are needed for delivering the defined value to customers; and (iii) value capture: In this section, it is specified how income is obtained

through presenting products, services and information to the customers (Bocken, Short, Rana, and Evans, 2013).

**<<<Insert Table 1: Business conceptual model>>>**

Chesbrough believes that technology has merely objective value which is not tangible. Economic value of a technology is recognized when it is commercialized through business models and is then introduced to the market. In fact, if a technology is introduced via two methods, it will have different results creating different values. Sometimes innovation could use the existing business model. In some cases, the company can use the economic value of a company through licensing. Although, in some cases, the company does not have the required business model for using a potentially new technology, the directors of the technology should adopt a wider view and use a suitable business model in order to utilize the technology value. Actually, if a medium-level technology is used in a perfect information-based business could prove much better than when a perfect technology is used in a simple business model. Therefore, without appropriate business model, it is impossible to utilize the real value of technology. Sometimes, the companies outside the organization may achieve an information-based business that is benefiting more than the primary company which produced the technology. Business model generally has the seven functions (i) it shows the way for creating value for customers (what certain value will be presented to technology users); (ii) it recognizes a target market and its income mechanism (for example, identifying the users for whom the technology is suitable and why they use it); (iii) it defines the structure of required value chain for creating a presenting the given value and specifies the required resources for supporting it; (iv) it specifies the income creation with its details; (v) it predicts the structure of cost and potential profit (according to the proposed value and the required value chain); (vi) it describes the company's status in the value creating network which connects the customers to each other (including recognizing complementary companies for this value and potentially competitive corporates); (v) it formulates the required competitive strategy in order to gain advantage over competitors.

Therefore, corporates utilize an innovative business model as much as they benefit from creating and developing an innovatively new technology (Chesbrough, 2010). Johnson, Christensen and Kagermann, (2008) consider the information-based business as having four interconnected parts



(Figure 1). Customer value proposition: successful companies should find a way for creating value for customers in order to solve one of their critical problems. Thus, companies should note that success is primarily not occurred through thinking about business, but what guarantees success is thinking about an opportunity that could obviate one of the real customer's needs. Profit formula: is a plan in which the company specifies that simultaneous with presenting value to customers how to create value for itself. The plan is formed of two important parts including incoming model, costs structure, margin of profit, and resource velocity. Key resources, such as human resources, technology, products, instruments, equipment, channels and brand that are required for presenting value to the target customers. It should be noted that here, the emphasis is placed upon recognizing key resources. Key processes: are defined as operational and managerial procedures that make certain value creation possible and are successfully repeatable.

**<<<Insert Figure 1: Parts of a successful information-based business >>>**

### **The relationship between strategy and business model**

It is essential to pay attention to the difference between “business model” and others such as “strategy” which are common in the management literature. These two terms could be considered different in two important aspects: First, some scholars such as Masanell and Ricart maintained that business models are a reflection of the realized strategies. In this regard, it is argued that strategy leads to the development of company potentials that could change the existing information-based business in the future. In fact, strategy deals with creating dynamic capacities in order to respond the needs of customers according to present and future conditions of the company. Dynamic capacities are defined as prediction, forming capacities and owning opportunities and avoiding threats simultaneously with keeping competitive advantage through improvement, combination, protection and (if necessary) rearrangement of tangible and intangible assets of company. Accordingly, strategy is a long-term view which leads to forming dynamic capacities (medium-term view) and specifies business models (present or short-term view) in order to deal with the present and future conditions of company (Figure 2).

**<<<Insert Figure 2: The relation between strategy and business model>>>**

Second, all organizations have a business model, but not all of them necessarily have strategies. Therefore, strategy shows that the company intends to change into something else in the future while the information-based business shows that in a certain time what the company will change into (DaSilva and Trkman, 2013, pp. 5-6). Porter points that mere attention to business without considering the concept of strategy may impede achieving competitive advantage. This issue is remarkably seen in cellphone applications. When a company introduces a software to the market, the competitors are still in the margin. The first business model may respond appropriately and experience some financial success. However, if the company is not prepared for potential competitions and changes, it will easily lose its competitive advantage. Here, having a pre-planned strategy could cause change in information-based business according to the conditions so that the company could keep its competitive advantage. Among the exemplars of this area, one could refer to Rovio company that introduced Angry Birds software to the market. The company introduced different versions of the software aiming at involving the customers and simultaneously entered clothing and toy industry which indicates a strategic action for increasing income flow. By strengthening its dynamic capabilities, the company could update its business model (DaSilva and Trkman, 2013, p. 8).

### **Designing business model**

According to Amit and Zotts' definition mentioned in the definition section, it is established that, first, information-based business should be visually depicted. Second, its forming structure and parts should be specified and third, it should show suitable value creating exchanges. In this definition, there are two distinct types of exchange. The first type is the exchange among the created value for customer and the price the customer pays for it and the second type deals with creating connections among processes and resources. In this regard, exchanges are considered as a process among partners or internal units of the company (Figure 3) (Simonse, 2014, pp. 69, 73).

**<<< Insert Figure 3: Different types of exchanges in information-based business >>>**

Depicting Maps of Business Models is promising approach that helps directors to reduce the obstacles for achieving a new business model and to examine and experience different models. In this way, it will be possible to specify a forming business model. The maps are similar to a primary resource based on which one could examine different combinations of processes and create numerous selections. One of the approaches was proposed by Alex Osterwalder. The approach enables company's modeling to simulate different probabilities in a real business model before investment (Chesbrough, 2010) (Figure 4).

**<<< Insert Figure 4: Nine parts of information-based business design>>>**

Osterwalder's model is one of the first attempts for creating a design instrument for business models. According to design thinking, the instrument showed appropriate effectiveness in primary stages of forming startup projects. Along with the schematic model, a process is suggested for designing information-based business which includes the following stages in Table 2.

**<<< Insert Table 2: The process for designing Osterwald's information-based business model>>>**

In the middle of the process, entrepreneurs will encounter five critical challenges: (i) finding appropriate business model; (ii) testing model before its full entrance into the market; (iii) exciting the market for applying the new model; (iv) continuous adaptation with the market considering the obtained feedbacks; and (v) uncertainty management. Canu, Kean, Martin, and Breda, (2016) suggested that in order to strengthen the fourth stage of the above process it is possible to use financial flow modeling in the design stage (the third stage). The process significantly helps the simulation of different business model modes and enables the entrepreneurs to compare the created value with the different primary business models. The purpose of this process is to reduce the risks in applying new information-based business in Osterwald's fourth stage. Hence, the created income flow is compared and simulated by any business model. The process suggests the 7 stages in the following (Table 3).

**<<< Insert Table 3: Strengthening Osterwald's process by the help of financial flow modeling>>>**

Many scholars in management studied the concept of business model. Many studies in this area focused on economic, financial, company performance and innovation processes (including Chesbrough and Rosenbloom). For instance, in 2010, Chesbrough examined the relationship between innovation and business model. He considered business model as an intermediary construct between technology and economic value and specified how innovative business model leads to success in business (Chesbrough, 2010). Zott and Amit examined the correspondence between information-based business and product marketing strategy through investigating the effect of product marketing strategy and suitable business selection on a company's performance (Zott and Amit, 2008). Johnson et al. investigate the role of innovative business models in reforming industries and the contribution to their growth and how business directors could design and revise their business models (Johnson, Christensen, and Kagermann, 2008).

Teece examined the studies conducted in business model among strategic management articles. His analysis manifested the importance of business model and its relation with business strategies, innovation management and economic theory. Given the importance of the topic, He is disappointed with shortage of the literature in business models. He held the view that despite many repetitions of the concept of information-based business in strategic literature, the concept is not well understood and little attention is given to the method for designing business models.

There are few studies that have common language, conceptual framework and appropriate schematic designs or facilitating understanding and designing business model. Without conceptualization, it will be difficult to conduct research on strategic management around innovative business models and competition (Teece, 2010). Most of studies with respect to designing and developing information-based business are about decision making and deals with questions about business model. The studies rarely examine the process of designing and sampling information-based business and in case of failure, deal with alternative strategies. Few authors such as Sosna, Trevinvo-Rodriguez, and Velamuri dealt with designing business model through trial and error. In this regard, the significant role of information systems of business models should be emphasized. Among the studies in information systems, one could take benefit for modeling, forming, display and visualization of business models and all related constructs. In

addition, the studies help us understand how techniques and instruments for designing could lead to improvement in information-based business design procedure and answering the strategic question (Osterwalder and Pigneur, 2013). Some of the conducted research in business models and their relations with some relevant issues are listed in the following table 4.

**<<<Insert Table 4. Litreture Review>>>**

### **Innovation and strategic innovation**

Innovation in the view of applying new ideas and behaviors is a construct helping companies to strengthen their competitive position in future (Prajogo, 2015, 3) and companies could survive only through continuous innovation in the complex and competitive atmosphere (Yang, 2014, p. 108). The concept of innovation is considered as a new structure or process for management, policy, design or new program, new production procedure, newly presented product or service in a company. Freeman (1982) defined the concept of innovation as marketing a newly developed product or as using a technological design, production, management and trading method in new process for the first time (Akbari et al., 2017; Kalay and Linn, 2015, 412).

According to O'cass and Weerawardenas' (2009) view, innovation is divided into two groups of technological and non-technological innovation. Technological innovation is related to the process and development of product while non-technological innovation refers to marketing and management approaches. O'Reilly and Tushman (2004) also emphasized these two aspects in their study (Mashahadi et al., 2016, p. 2). Fabrizio and Thomas (2011) believed that organization invest on developing investment innovation for presenting services to larger markets since it is expected that the profit in larger markets are higher. Hence, by breaking old strategies and re-forming strategic elements, organizations follow new strategies for creating value (Yang, 2014, 108). In other words, this is when an innovator organization needs an innovative strategy since strategies cannot control fundamental changes in future without having certain innovation strategies (Prajogo, 2014, 3). Hence, the issue of strategic innovation is introduces whose purpose is to change the formation of business model, creation of new markets and increase in customers' value (Gebauer et al., 2012, 57).

According to Derrick and Sorens' view (2007), strategic innovation is used for creating strategy and producing exclusive products and services and new processes for improving growth and

production of new values for companies (Yang, 2014, 107). In other words, it refers to trends that change the nature of competition and obtains its competitive advantage by applying different strategy (Ibid, 108). Innovation in product and service strengthens the existing information-based business in a company while strategic innovation pays attention to the existing competition and exiting the dominant performance. This approach could recognize a wider range of strategic options in comparison with common strategy of the company and therefore, allows the company to identify opportunities considered as limitations for competitors (Gebauer et al., 2012, 57).

Studies related to strategic innovation were done during 1980s and early 1990s. The first definition of strategic innovation was proposed by Deft Webeker (1982) which consisted of different innovations. After that, many scholars suggested different definitions of strategic innovation; others focused on company's abilities for redefining customer value chain and company while some scholars examined environmental pressures and others believed that strategic innovations affect company's inputs and outputs (Yang, 2014, 107).

Although there are numerous definitions for strategic innovation in the literature, the main emphasis was placed upon breaking current rules and passing new rules. The definition was not solely proposed for industries, but incorporated resources, organizational culture, processes, individuals and central capacities of a company (Ozkan-Canbolat et al., 2016, p. 686). According to Zin's definition (1995), strategic innovation is the result of successful adaptation of organizational requirements with environmental changes such as new ideas, processes, techniques and services (Yang, 2014, 107) and allows the company to recognize opportunities that are only considered as limitations in the competitors' view. Moreover, it could result in increase in market share since it changes the shape of current markets by change in the competition's nature (Gebauer et al., 2012, 57).

Markides (2000) regards strategic innovation as a totally different method in competition in an industry which emerges through breaking the rules of the game. In his view, a critical element is defined as: "reconceptualization of what is about business and which method will lead to different methods for playing the game accurately in the industry" (Ozkan-Canbolat et al., 2016, p. 686). With a wider perspective than the traditional view, strategic innovators try to find undefeated environments in market and create superior value, innovation in the process of value creation (Gebauer et al., 2012, p. 58). In other words, the results of innovation could be considered in new business model (including the architecture of new value chain), new markets

(through creating new markets or reshaping the existing market) and creating added value for customers and company (Ozkan-Canbolat et al., 2016, p. 686).

### **The significance of strategic innovation**

The bond between innovation and strategy for effective management is important and without strategy, it will be impossible to improve performance and other organizational successes.

Strategic innovation is a fundamental concept for companies referring to change in the rules of the game with three elements: redefining business model, changing the existing market and improving customers' combined value (Ozkan-Canbolat et al., 2016, p. 687). Successful experiences show that overcoming a highly competitive environment, breaking the rules and utilizing strategic innovation could create stable competitive advantage affecting organization's efficiency. Strategic innovation potential in organizations changes depending on the market environment. However, it should be noted that organizations' survival and development is only possible through continuous innovation (Yang, 2014, 108). Simply put, innovation is an important strategic tool for creating competitive advantage in complex environments (Mashahadi et al, 2016, p. 1).

Scholars believe that strategic innovation guides companies for adaptation, integration and reconfiguration of technological potentials and managerial capacities in different contexts allowing them to keep and promote their competitive position and performance. Finally, strategic innovation would cause innovation goals to have interdependent and clear innovation with a clear path for innovation process (Gebauer, 2012, p. 58). According to the conducted studies and the literature, 19 strategic innovations could be introduced. Different kinds of strategic innovation are defined in Table 5.

**<<< Insert Table 5: Kind of Innovations>>>**

### **Strategic innovation management**

by recognizing the gaps in industries, companies create strategic innovation and it will lead to profitable growth for organization through creating new atmosphere in the market or

reconstructing the market boundaries, changing the principles of the market, creating higher value for customer and cost reduction (Ozkan-Canbolat et al., 2016, p. 686).

Hence, strategic innovation management refers to the total set of initiative methods related to competition mechanism analysis such as innovative outlooks, coordination of business strategy, and spreading strategy for all levels of organization, market inclination, technology performance and competitors. Given to the fact that strategic innovation management is known as a process, there are many definitions for it (Kalay and Linn, 2015, p. 412). Dankbaar (2003) defined two different approaches that are complementary despite being different from each other. According to his definition, strategic innovation management referred to a prerequisite in organization that persuades individual's creativity or the process of using information. Moreover, it referred to the technology management process, business process (customers, suppliers, financial, external and other resources), human relations (culture, communications, organization, etc.) that encourage innovation. In this regard, success in innovation depends on resources (human, equipment, technology, information, etc.) and organization capability for managing these resources.

### **Strategic innovation and innovative performance**

Reviewing and analyzing 42 studies in 21270 companies around the world demonstrated that innovation in organizations lead to better use of organizations' rare resources and better performance (Rosenbusch, et al. 2010). In Porter's words, strategy is a set of activities that make the organization distinct from other competitors and keep its competitive position. Studies show that corporates using the innovation strategy have been more successful than others. Innovation strategy acts as a guide for company since there must be primary thought before applying innovation. Also, innovation has financial goals and facilitates the growth of a new product or good. Moreover, it is considered as a general criterion for a set of filtering strategic rules when creating a new product or service. Also, goals, it provides methods and ways for increasing and improving creative potentials and enables senior management to follow its competitors activities for achieving customers' information and using resources of organization and investment in research and development department. Such activities could have positive effects on innovative performance of a company.

On the other hand, companies continuously act based on internal and external probabilities. Regarding probabilities, it is essential for uncertainty management in environment that organizations have effective strategies for improving their performance. For example, in an



atmosphere with increasing competition and customers' needs, the directors' strategy is to devote suitable resources to develop innovative performance of the company. In other words, applying innovative strategy ensures the company that successful innovations will be used for reducing probabilities and uncertainties (Kalay and Lynn, 2015, 414). Hence, one can argue that applying innovation strategy could affect innovative performance. In other words, companies with more innovation strategies act more creatively and successfully. This finding is confirmed in various studies (Table 4) such as Besant and Tid (2007), Oke et al., (2012), Verhiz and Melenburg (2004) (Ibid, 423).

## **Methodology**

The present paper focuses upon SMEs in ICT. Iranian SMEs that have business model with strategic innovation approach. On the one hand, Business Model is a key factor for businesses to achieve competitive advantage and identifying a business model for SMEs could coordinate efforts made by experts and managers in this field. Therefore, it seems that having an innovative business model along with new technology is the condition for success in the contemporary world and all of the directors and entrepreneurs should have an accurate understanding of business model concept and improve this issue. The purpose for writing the article is to help accurate and distinct understanding of the business model concept and critical steps in designing an appropriate business model. The conducted studies that simultaneously dealt with the business model and strategic innovations are few and there was no research observed in Persian sources by the time the proposal was written? Grounded Theory had used for this purpose with interviews. Interview's Questions used for data gathering (Appendix 1). The main research question is "What is a business model framework with the strategic innovation approach in the SMEs of ICT industry? What are the components of this model and the relations between them? (Appendix 2).

## **Validity**

To improve the quality of results, five validity processes introduced by Lincoln and Guba (1985) are carried out as (i) credibility was accomplished by providing data interpretation feedback to research participants, (ii) transferability was achieved by continuing the sampling process until

reaching stability, regarding the theoretical categories and properties, such that no new disconfirming data could be found by continuing the sampling process (Glaser and Strauss, 1967), and the concepts can explain all data points “from all participants”. (iii) Dependability was achieved by asking participants to reflect on past and recent events, ensuring the findings were not limited to recent time or place, to aim for consistency in explanation. (iv) Confirmability was achieved by an audit of data analysis by co-researchers, to ensure researcher bias was avoided. (v) Integrity was attained through the avoidance of participant evasion, achieved by interviewing in a professional and non-threatening way and ensuring confidentiality. The ‘Grounded Theory’ also requires the emerging theory to satisfy four criteria – fit, understanding, control and generality (Glaser and Strauss, 1967). To date, the emerging concepts and value fit well with the data, the actions of the interviewees are understandable, and are generally enough in conceptual explanation, to provide some level of control for future situations. Data collection and analysis continued iteratively, to theoretical saturation with no new perspectives emerging.

. Saturation was reached at approximately 15 interviews (Table 6).

**<<< Insert Table 6: Research Participants Profile>>>**

### **Analytical Process**

The Grounded Theory builds through a six-step process (Glaser and Strauss, 1967; Strauss and Corbin, 1990). (i). Data collection and analysis were conducted to explore the data. Sampling was not by population, but rather pursued variation in interviewee experience (Table 6). (ii) Data was coded to find categories (Tables 7, 8, 9, 10) (open coding), their relations (axial coding) and later, an overarching theme (selective coding). (iii) Categories were compared with data and revised accordingly (Table 11).

**<<< Insert Table 7: Causal Conditions>>>**

**<<<Table 8: Contextual Conditions>>>**

**<<< Insert Table 9: Intervening conditions>>>**

**<<< Insert Table 10: Strategies>>>**

**<<< Insert Table 11: Consequences>**

(iv) The outcomes of analysis, through identifying categories and comparisons, were documented using field ‘memos’, to reflect and resolve researcher bias. (v) Data collection and analysis continued iteratively, to theoretical saturation with no new perspectives emerging (Table 12).

**<<< Insert Table 12: Core Category/ Main Phenomenon>>>**

(vii) The produced theory was compared with current literature to enrich the theoretical explanation. Categories and properties have all been connected to a core category, or core variable. Glaser and Strauss (1967) explained, “in the beginning one’s hypotheses may seem unrelated, but as categories and properties emerge, develop into abstraction, and become related, their accumulating interrelations form an integrated central theoretical framework - the core of the emerging theory” (Glaser and Strauss, 1967). The core variable tied together the diverse perspectives in the data, creating a more systemic perspective than those of individual pieces of data. An attempt was made to explore significant relationships between core categories in various ways. Using a modeling approach in this stage showed a clear relationship between core categories. Theoretical coding was continued up to achieving the final model (Figure 5).

**<<< Insert Figure 5: Conceptual Framework of Business Model with Strategic Innovation >>>**

## **Conclusion**

Given the issues discussed in the theoretical literature and according to the resource-based view, a company is a set of capacities that should be applied effectively for creating competitive advantage. The focus of this view is on increasing internal capacities of companies. Therefore, the view cannot effectively demonstrate the existing complexities in contemporary business models. Technology can create value as long as it is used or exchanged in a suitable business model. Thus, the core of a business model in 21st century is a combination of resources that could create value for company and its customers by transaction. The view is valuable in the sense that in addition to focus on internal capacities, it attracts the managers and entrepreneurs’ attention to transactional opportunities with outside context. Accordingly, the company may not find a suitable business model for using a new technology effectively, but could license it to those who are able to create such model and thereby, create value (open innovation model).

Business model is a conceptual instrument for knowing and understanding how a company does its business. With this view, it is possible to use business model for analyzing, comparing different, evaluating, effectively managing, transferring and informing a business to others. The economic value is revealed when it is commercialized through business models and introduced to a market. If a medium technology is applied to a perfect business model could be more valuable than when a perfect technology is used in a medium business model. Business models are the reflection of strategies in the sense that strategy leads to the development of dynamic capacities in a company (potential for prediction, shaping and possessing opportunities and avoiding threats simultaneous with keeping competitive advantage through improvement, combination, protection and rearrangement of tangible and intangible assets) which could change the existing business model in future. Therefore, dynamic capacities of companies shape business models and managers and entrepreneurs should create the required capacities for applying a suitable business model by adopting suitable strategies and predicting required capacities in future. Furthermore, mere attention to business without considering the notion of strategy may impede achieving competitive advantage since having a preplanned strategy could result in change in suitable business model depending on change in conditions in order for the company to keep its competitive advantage. Therefore, managers should (Simonse, 2014): (i) select suitable business model for the present time (a combination of resources and related transactions); (ii) implement their business model perfectly; (iii) by applying suitable strategies, they should continuously strengthen dynamic capacities of companies; (iv) they should effectively modify their business model in the appropriate time when new opportunities or threats are revealed; (v) there are three crucial elements in any business model, which is, designing presentable value to customers, creating and presenting value to customers and receiving the created value; (vi) in order to design a business model, it should be first visually depicted. Second, the forming structure and components should be specified and third, value creating transactions should be efficiently shown. The visual maps are a primary source based on which one could examine different forming processes of a business model and create various models for analysis and selection of the best one; and (vii) designing a business model includes 5 main stages, namely, obtaining required preparations, knowing required elements in business model, designing various models for testing, selecting suitable model and testing it in the market and modifying the model based on market feedbacks.

Increase in competitive pressures and new needs of customers necessitate finding new ways for competition in companies. An innovative organization needs an innovation strategy since organizations cannot control critical future changes without having a specific innovation strategy. In this context, strategic innovation is proposed as one of the critical ways that help us to achieve competitive advantage through rethinking business, redesigning industries and reconstructing value for companies. Thus, due to difficulty in imitation, strategic innovation directly affects company's competitive position (Ozkan-Canbolat et al., 2016, p. 686; Kalay and Linn, 2015, p. 413).

With respect to the effect of strategy view on innovation performance, one could argue that innovative and profitable activities are managed by company's opportunities. The opportunities include potentially profitable contexts that senior manager of companies are able to understand and use them. When managers cannot understand the opportunities or do not want to use them or even cannot respond to them, there will be fewer opportunities and hence, one could argue that strategic innovation is one of the dimensions for improving organizational performance.

## References

- Antikainen.M,Valkokari.K. (2016) .A Framework for sustainable Circular Business model Innovation. Journal of Technology innovation management review,6 (7),5-12
- Antoncic, Bostjan, and Hisrich, Robert D. (2004). Corporate entrepreneurship contingencies and organizational wealth creation. Journal of Management Development, 23(6), 518-550.
- Bocken, N., Short, S., Rana, P., and Evans, S. (2013). A literature and practice review to develop sustainable business model archetypes. Journal of Cleaner Production, 43.
- Canu, C., Jean, C., Martin, A., and Breda, G. (2016). A NEW TOOL TO DESIGN BUSINESS MODELS – APPLICATION TO THE EHEALTH SECTOR. 23 th Conference of the Conception of Science And Innovation. Prague.
- Chesbrough, H. (2010). Business Model Innovation: Opportunities and Barriers. Long Range Planning, 43, 354–363.
- DaSilva, C., and Trkman, P. (2013). Business Model: What It Is and What It Is Not. Long Range Planning.
- I.S. Jacobs and C.P. Bean, “Fine particles, thin films and exchange anisotropy,” in Magnetism, vol. III, G.T. Rado and H. Suhl, Eds. New York: Academic, 1963, pp. 271-350.
- Glaser BG, ed. Grounded theory. 1984-1994. Volume 1. Mill Valley. California: Sociology Press; 1995a.

- Glaser BG, ed. Grounded theory. 1984-1994. Volume 2. Mill Valley. California: Sociology Press; 1995b.
- Glaser BG, Strauss AL. The Discovery of Grounded Theory: Strategies for Qualitative Research. Chicago: Aldine Publishing Company; 1967.
- Johnson, M., Christensen, C., and Kagermann, H. (2008). Reinventing Your business model. Harvard Business Review, 86(12), 50-59.
- Johnson, M., Christensen, C., and Kagermann, H. (2008). Reinventing Your Business Model. Harvard Business Review, 59-67.
- K. Elissa, "Title of paper if known," unpublished.
- Lincoln YS, Guba EG. Naturalistic Inquiry. Newbury Park, California: Sage Publications; 1985.
- Morris MH, Schindehutte M, LaForge RW. Entrepreneurial Marketing: A construct for integrating emerging entrepreneurship and marketing perspectives. Journal of Marketing Theory and Practice. 2002;10(4):119.
- M. Young, The Technical Writer's Handbook. Mill Valley, CA: University Science, 1989
- Osterwalder, A., and Pigneur, Y. (2013). Designing Business Models and Similar Strategic Objects: The Contribution of IS. Journal of the Association for Information System, 14, 237-244.
- R. Nicole, "Title of paper with only first word capitalized," J. Name Stand. Abbrev., in press.
- Simonse, L. (2014). Modeling Business Models. Design Issues.
- Souto, J. E. (2015). "Business model innovation and business concept innovation as the context of incremental innovation and radical innovation". Tourism Management (51), 142-155
- Strauss A, Corbin J. Basics of qualitative research: techniques and procedures for developing grounded theory. Newbury Park: Sage publications; 1990:p.41.
- Tanya Sammut-Bonnici and Sotirios Paroutis (2013) , GUEST EDITORIAL Developing a dominant logic of strategic innovation University of Warwick, Coventry, UK.
- Taran, Y., Boer, H., Lindberg, P. (2014). "Incorporating Enterprise Risk Management in the Business Model Innovation Process", Journal of Business Models, Vol. 1, No. 1, pp. 38-60
- Teece, D. (2010). Business models, business strategy and innovation. Long Range Planning, 43, 172-194.
- Terence Tse, (2013), Paradox resolution: A means to achieve strategic innovation, London
- Veit, D., Clemons, E., Benlian, A., and Loos, P. (2014). Business Models: An Information Systems Research Agenda. Business and Information Systems Engineering.
- Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interface," IEEE Transl. J. Magn. Japan, vol. 2, pp. 740-741, August 1987 [Digests 9th Annual Conf. Magnetics Japan, p. 301, 1982].
- Zott, C., and Amit, R. (2008). The fit between product market strategy and business: implications for firm performance. Strategic Management Journal, 29, 1-26.

## **Appendix 1: Interview's Questions**

### **The main research question:**

What is a business model framework with the strategic innovation approach in the SMEs of ICT industry? What are the components of this model and the relations between them?

### **Research Sub-questions (main questions of different sections):**

1. What is the main phenomenon (and its dimensions) of a business model with the strategic innovation approach in the SMEs of ICT industry?
2. What are the consequences of a business model with the strategic innovation approach in the SMEs of ICT industry?
3. What are the causal conditions of a business model with the strategic innovation approach in the SMEs of ICT industry?

### **According to the literature in this area, theoretical questions are as follows:**

1. What is the basis of a business model?
2. When should a business model be created?
3. When SMEs engage in business model innovation through the process of general strategy development?
4. How do SMEs design a new business model?
5. How do SMEs improve their existing business model with respect to the process of general strategy development?
6. How can business model innovation lead to competitive advantage?
7. How can SMEs' business model lead to discover new business opportunities when they use developmental strategies?
8. How does SME's business model bring new business opportunities?
9. How does SME's business model lead to achieve strategic competitive advantage?
10. How does the SME's business model lead to economies of scale?
11. How does SME's business model lead to exploit multiple sales opportunities?
12. What should be the conditions within the SME's that lead to create an innovative business model?
13. What are the conditions for creating innovation in SME's strategies?
14. How can innovation in strategic processes be created during the business model modification?
15. What are the environmental conditions affecting the business model innovation in strategic processes?

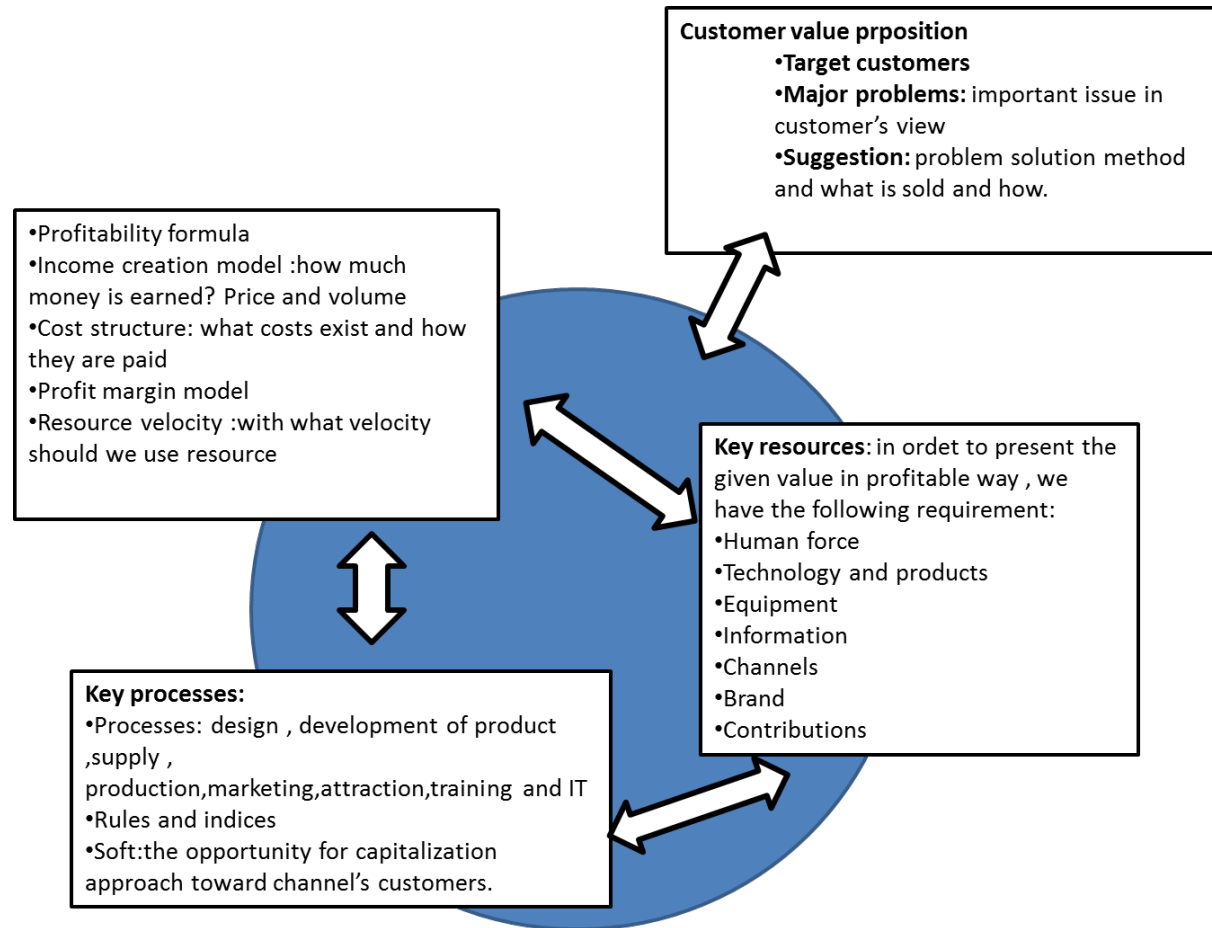
16. Which environmental strategic factors affect business model innovation?
17. How do technological changes lead to the business model modification through the strategic innovation approach?
18. How do the changes in the market environment change the business model?
19. How does changing consumer behavior change the revenue model of the business model?
20. What are the components of the SME's business model?
21. How do the SME's environmental changes alter the business model components?
22. How does innovation in the business model create value for the company (SME)?
23. What value does business model innovation make for corporate stakeholders?
24. To what extent is the business model innovation relevant to company's strategies?
25. Which factors in the industry, national and international environment are important for creating an innovative business model to achieve long-term competitive advantage?



## Appendix 2: Interview's Questions and Answers

Interview's Questions	T Q 1	T Q 2	T Q 3	T Q 4	T Q 5	T Q 6	T Q 7	T Q 8	T Q 9	T Q 10	T Q 11	T Q 12	T Q 13	T Q 14	T Q 15	T Q 16	T Q 17	T Q 18	T Q 19	T Q 20	T Q 21	T Q 22	T Q 23	T Q 24	T Q 25
1. Would you please describe your business background?	*	*														*									
2. Please explain the steps and story of your business formation.	*	*				*						*	*		*					*				*	
3. Do you have a strategic plan? Which factors lead you to make innovation in company's programs (strategic plan)? Or to start producing new product/ service? And Why?			*	*	*	*	*	*		*		*	*	*	*				*		*	*	*	*	
4. What is your approach to grow in the competitive market of ICT industry? How have the changes in market environment affected your business model?		*		*			*	*	*			*	*	*				*			*				*
5. What effects have the environmental changes (economic, politic, and social factors) had on your business model? Which kind of changes had more impact? How do you normally handle these changes?			*		*			*						*	*	*	*	*			*	*		*	*
6. Which products/ services have more income/ benefit for you?	*					*		*		*	*				*				*	*					
7. What is your value proposition to your customers?	*								*		*								*	*	*		*		

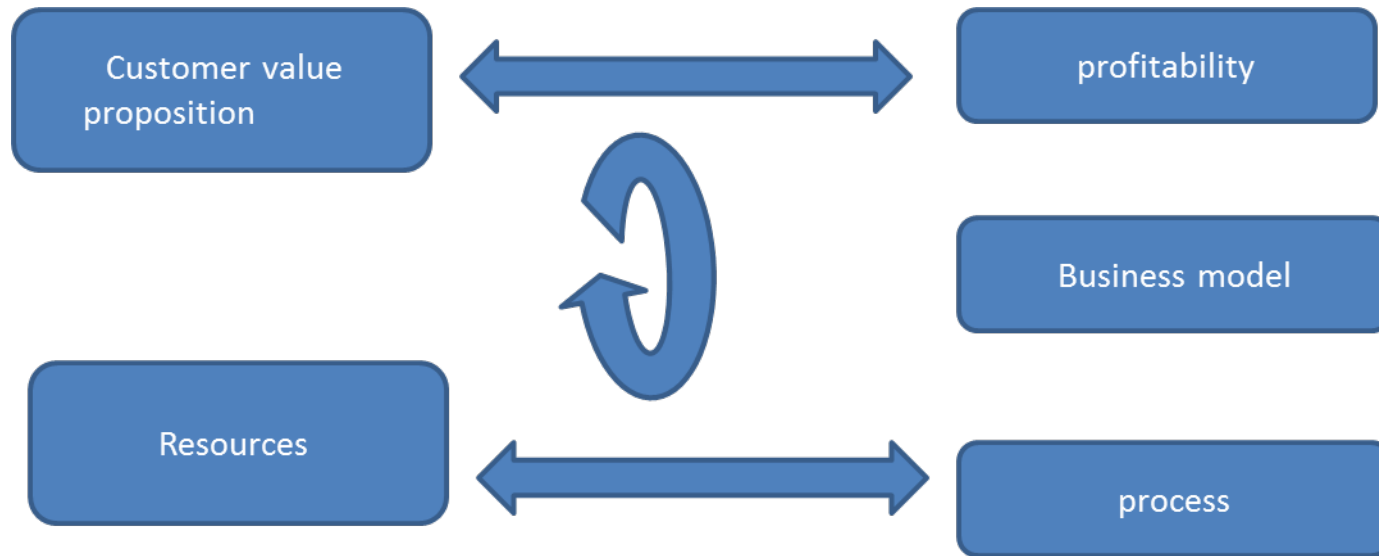
**Insert Figure 1: Parts of a successful business model**



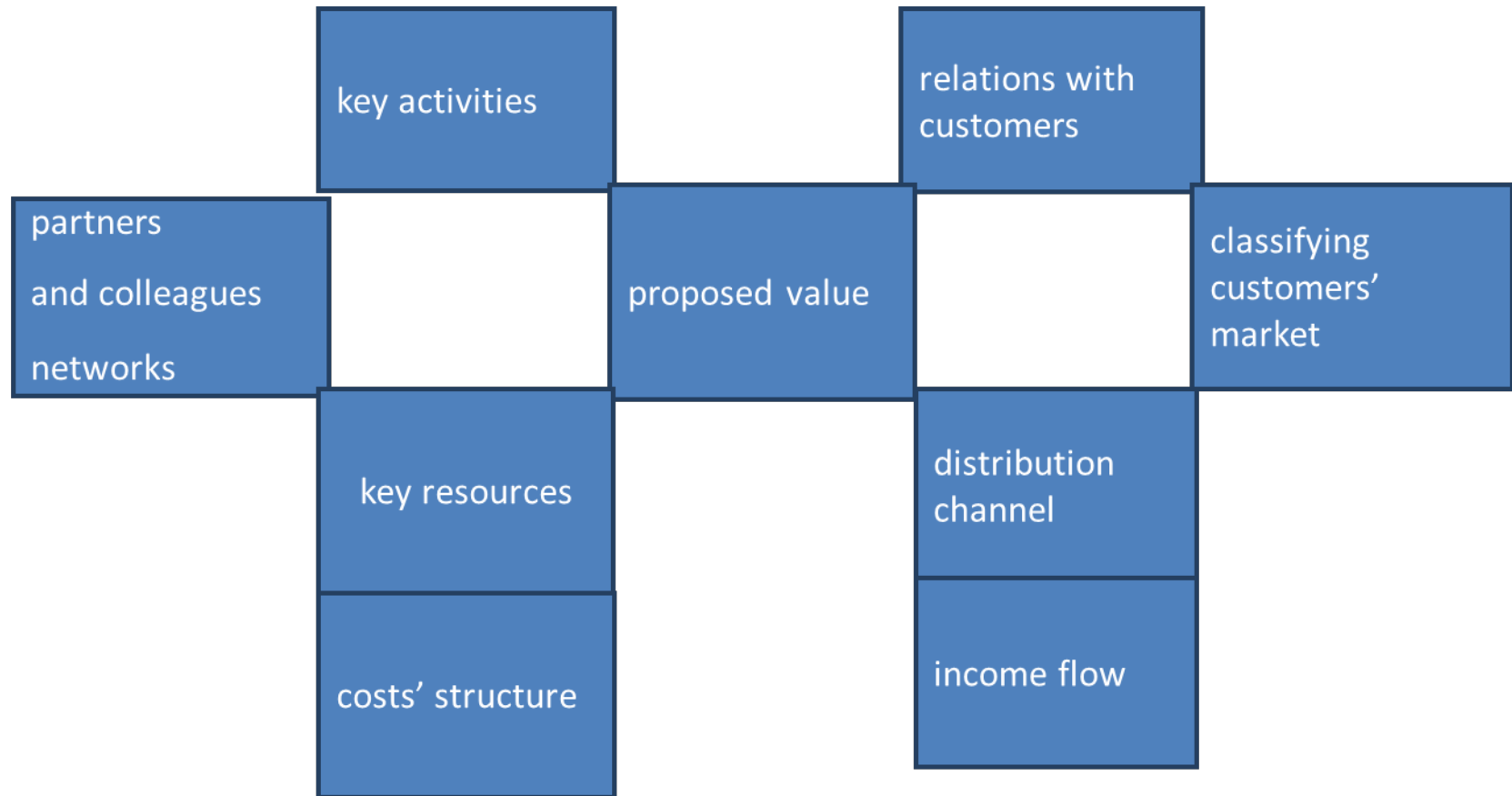
**Insert Figure 2: The relation between strategy and business model**



**Insert Figure 3: Different types of exchanges in business model**



**Insert Figure 4: Nine parts of business model design**



**Figure 5: Conceptual Framework of Business Model with Strategic Innovation**

